

Figure 1(a) (Prior Art)

FIG. 1(b)

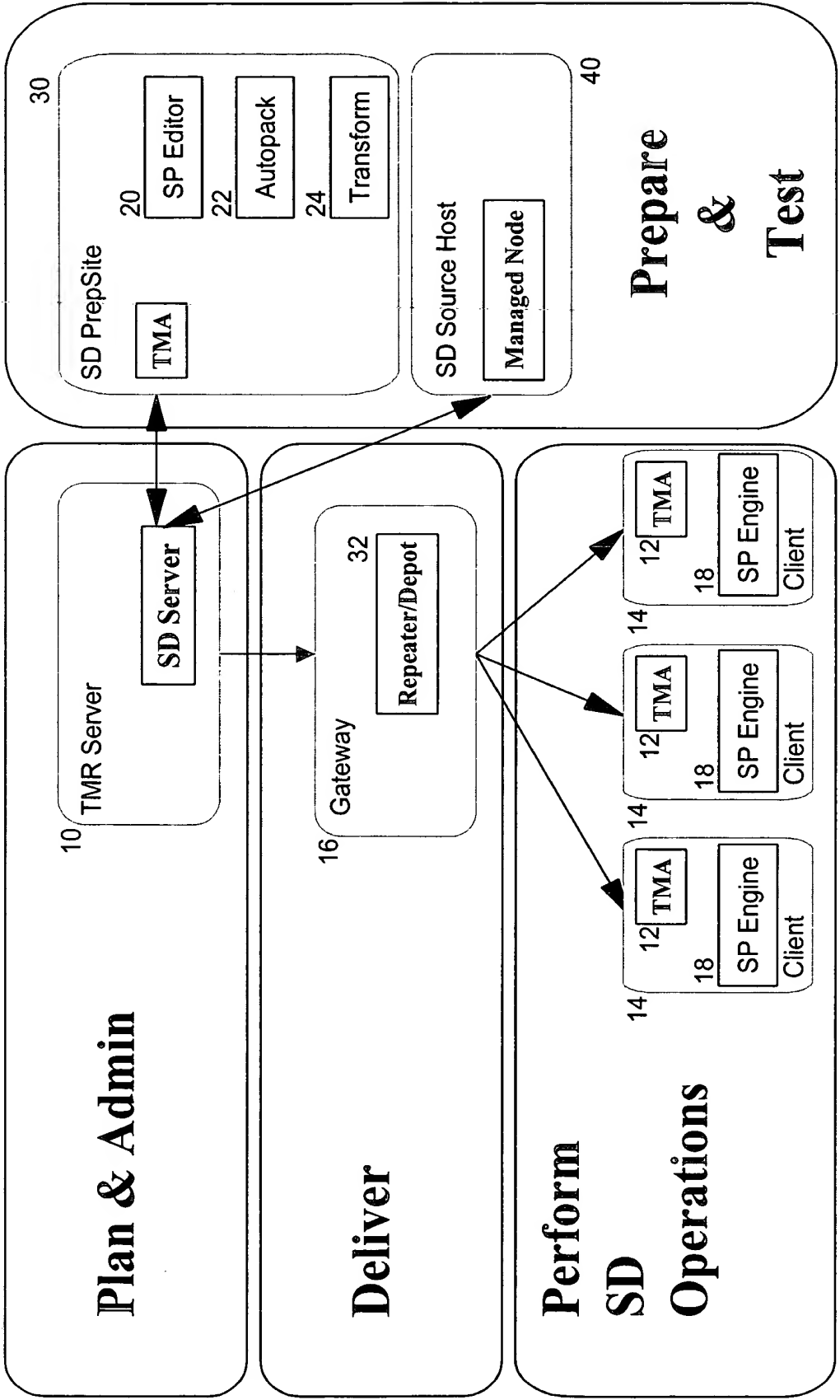


Figure 1(b)

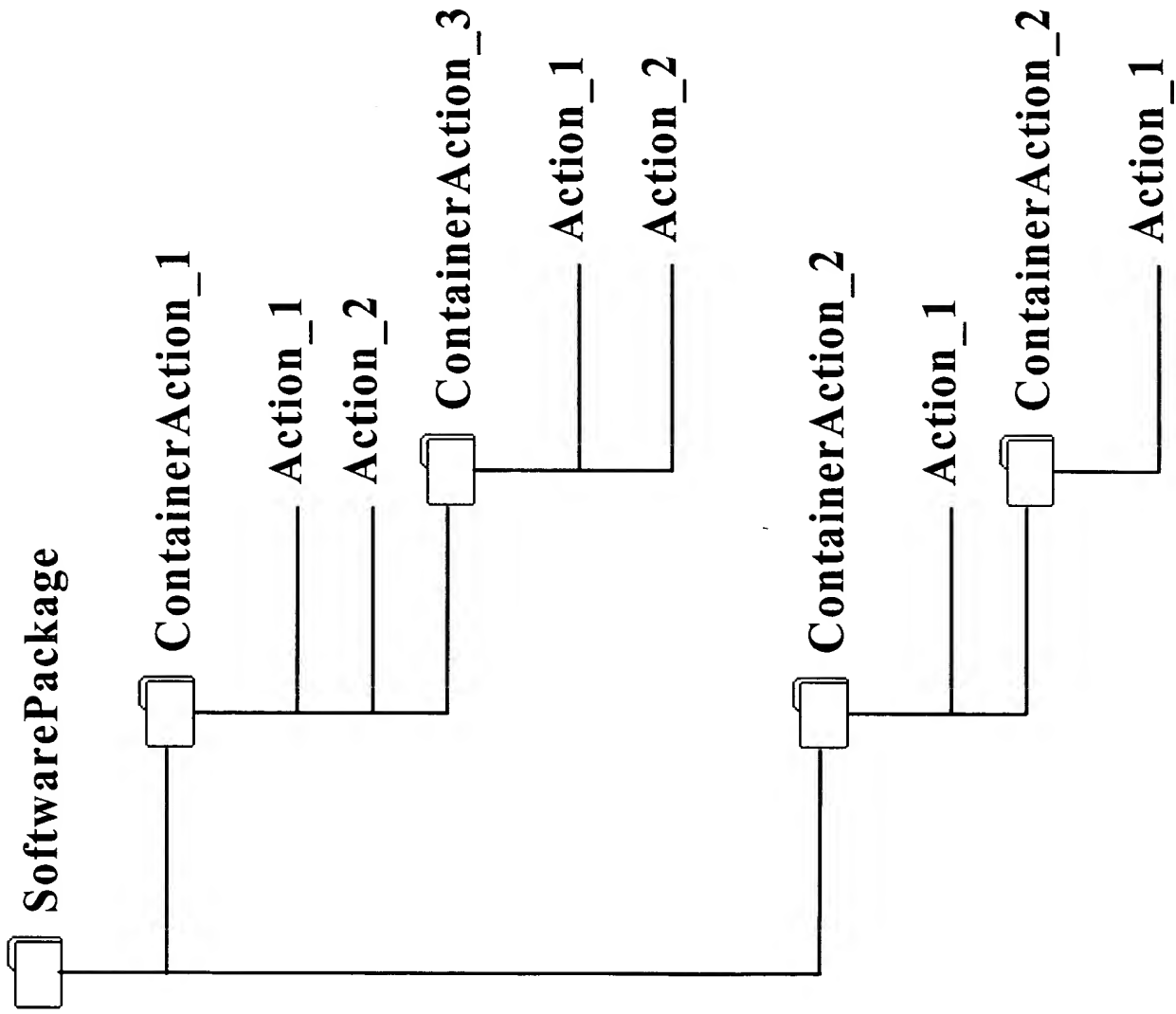


Figure 2

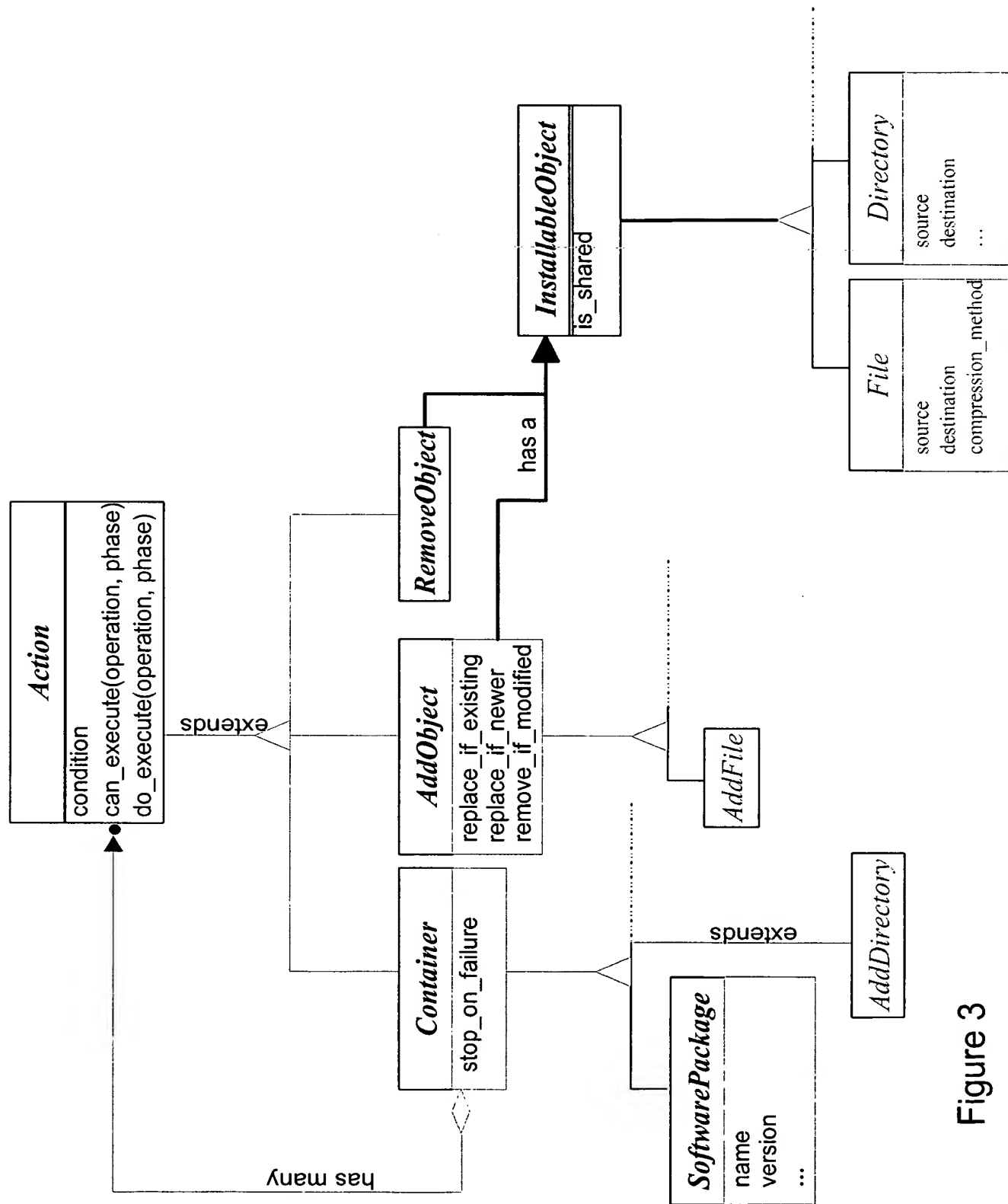


Figure 3

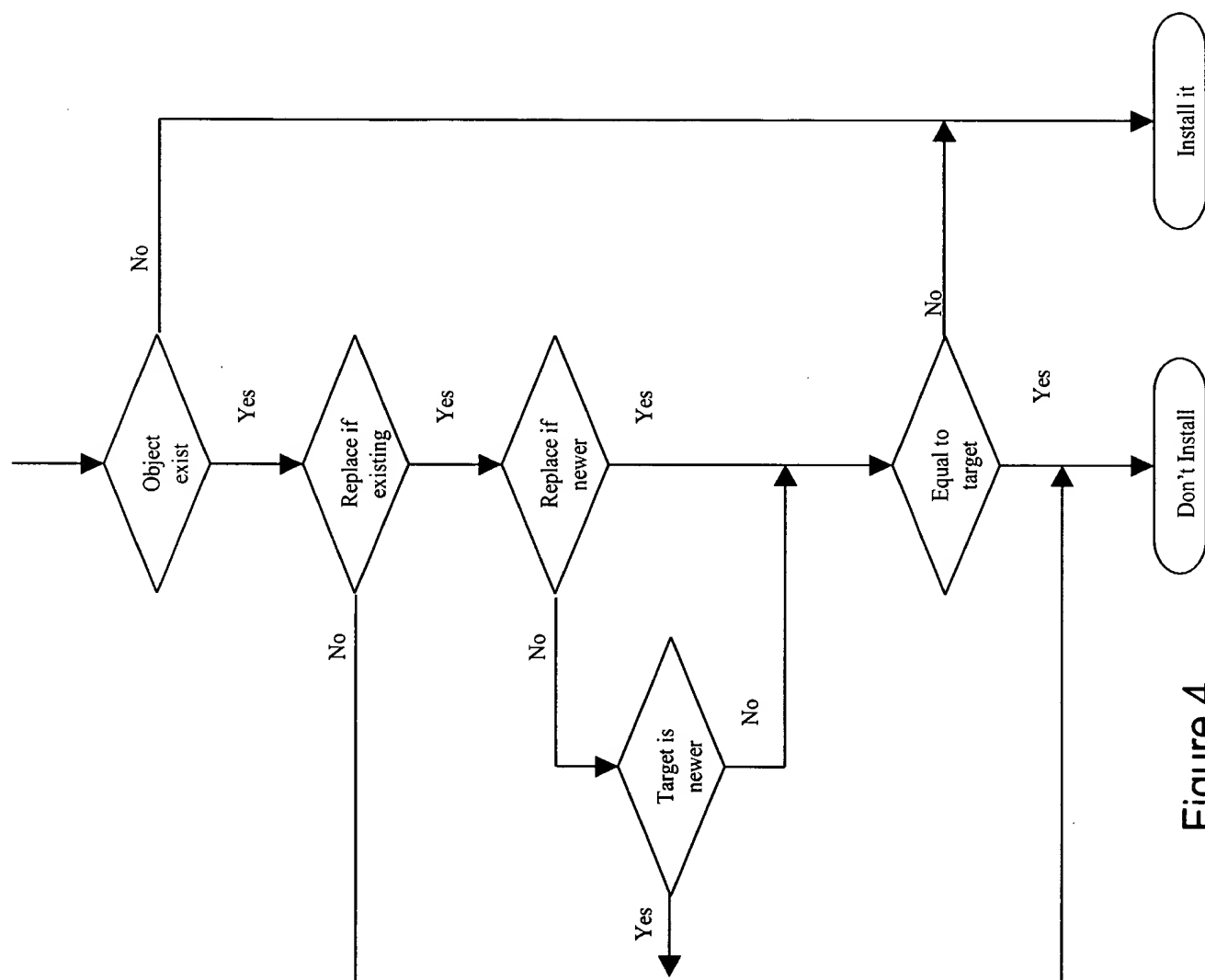


Figure 4

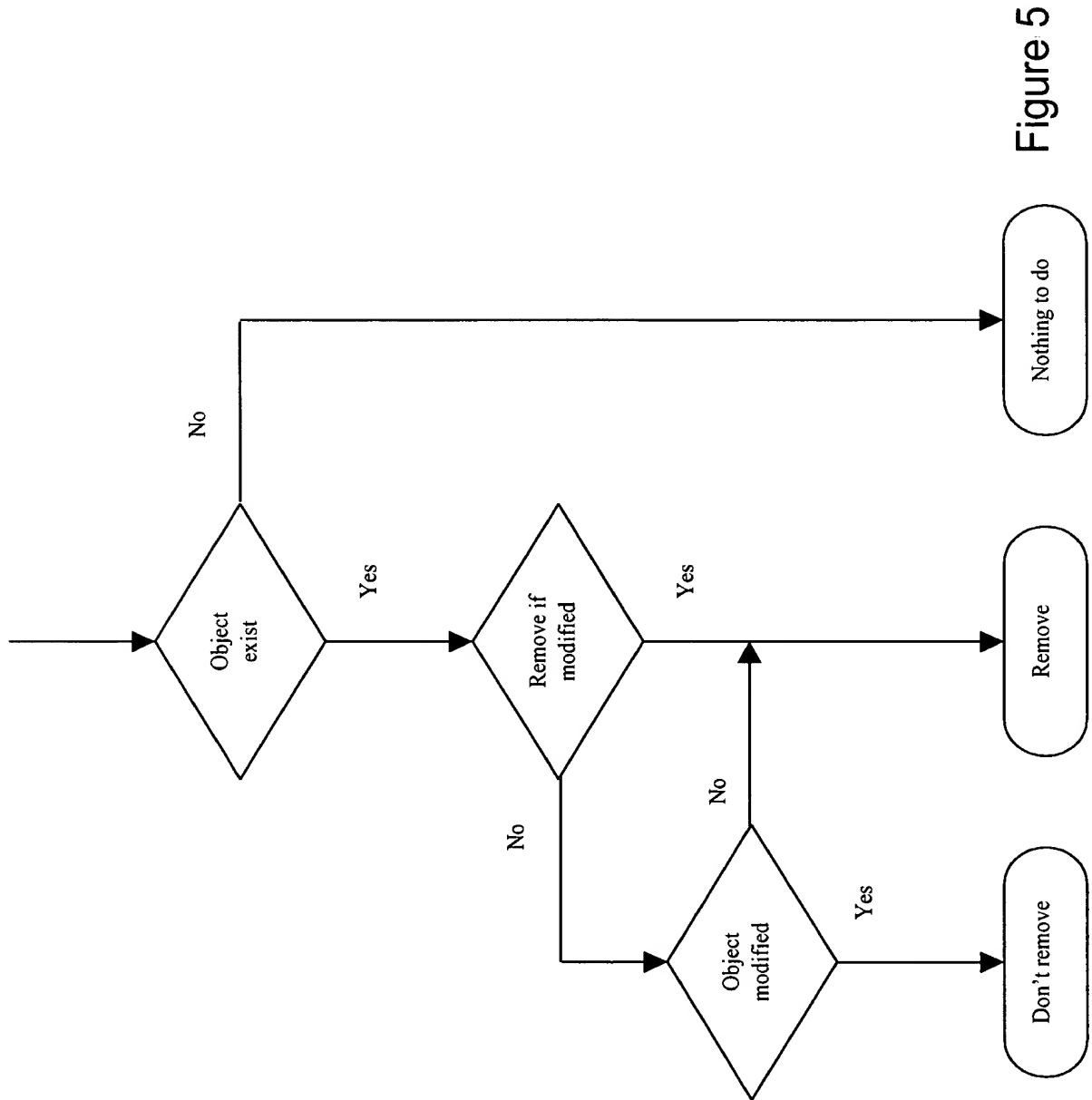


Figure 5

0976631 02210 " 1899760

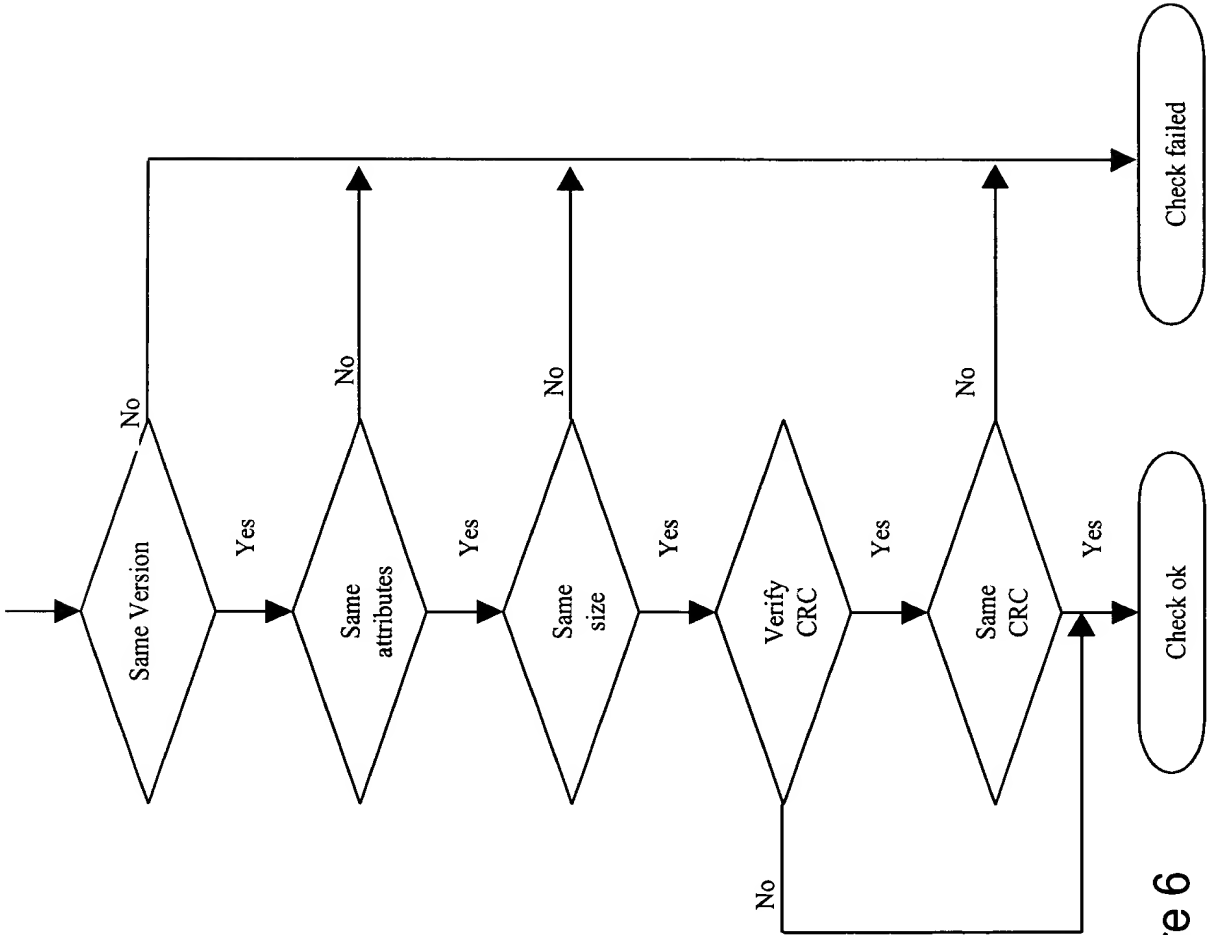


Figure 6

Object related actions	Registry Key and Value
	Shell Folder and Shortcut
	INI file Section and Item
	NT Service
	Profile Item
	Desktop Object, Folder, Program, Shadow
	Directory and File
	Text file line, command, token Symbolic link
System actions and Checks	
Program actions	Restart
	Check disk space
	Execute user program
	Execute MS Setup program
Program actions	Execute InstallShield program
	Execute CID Program

Figure 7

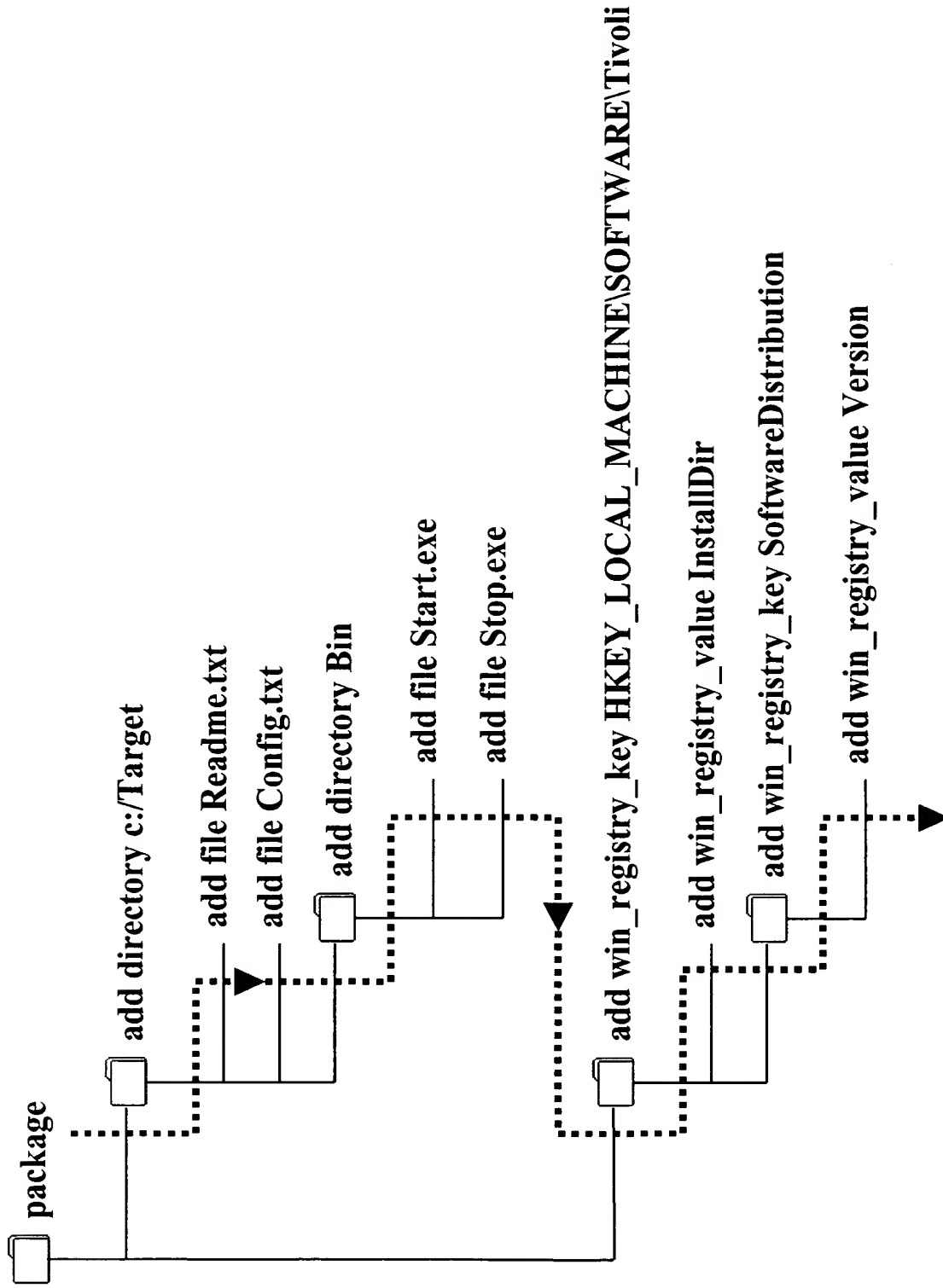


Figure 8

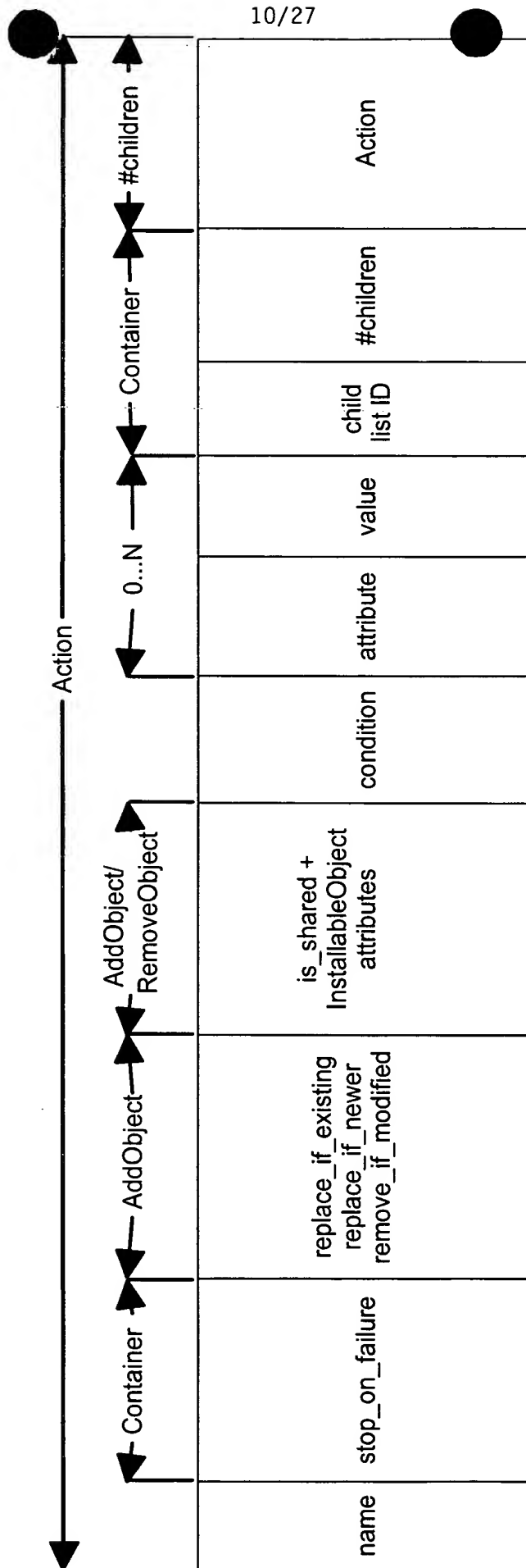


Figure 9

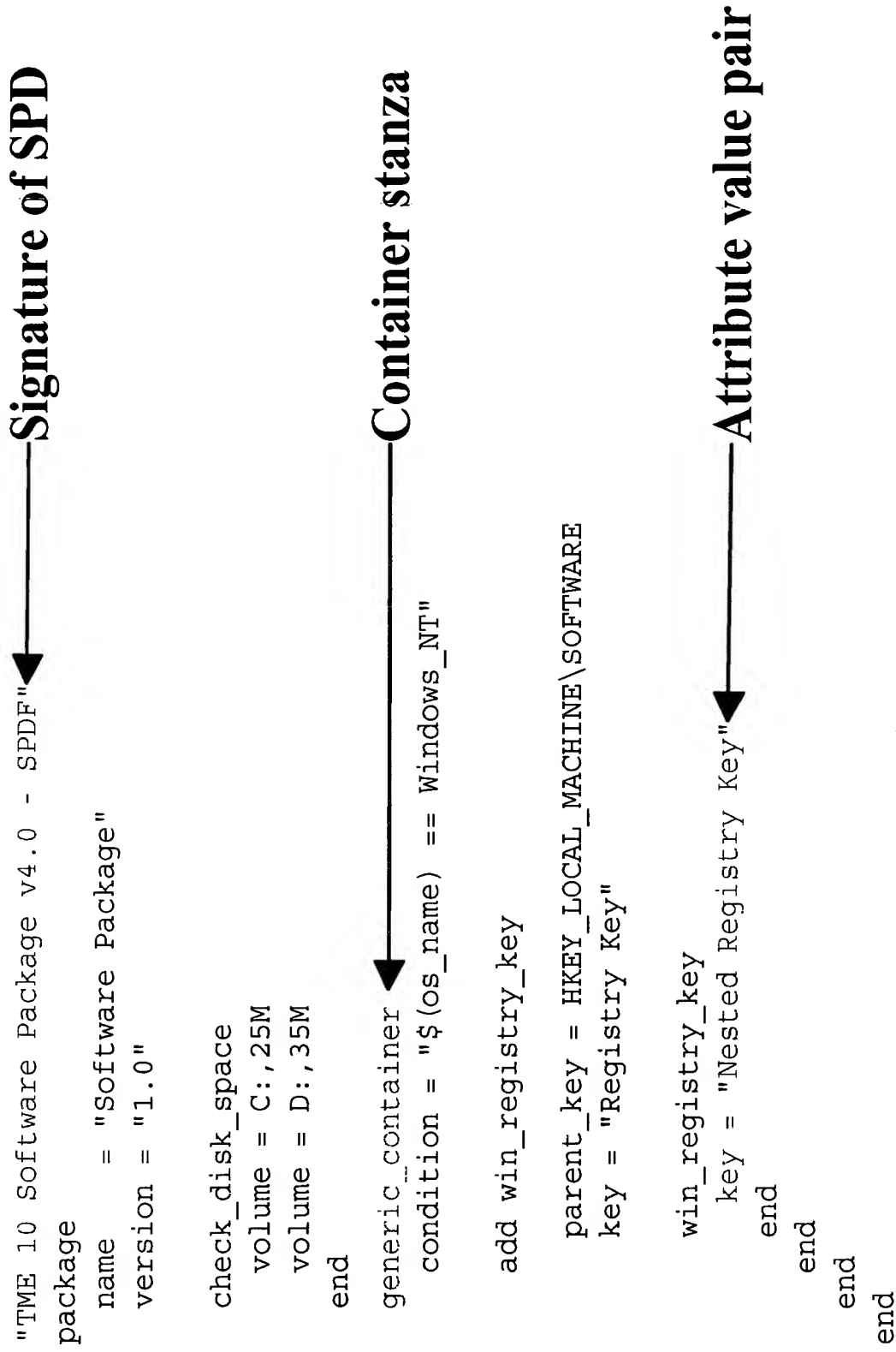
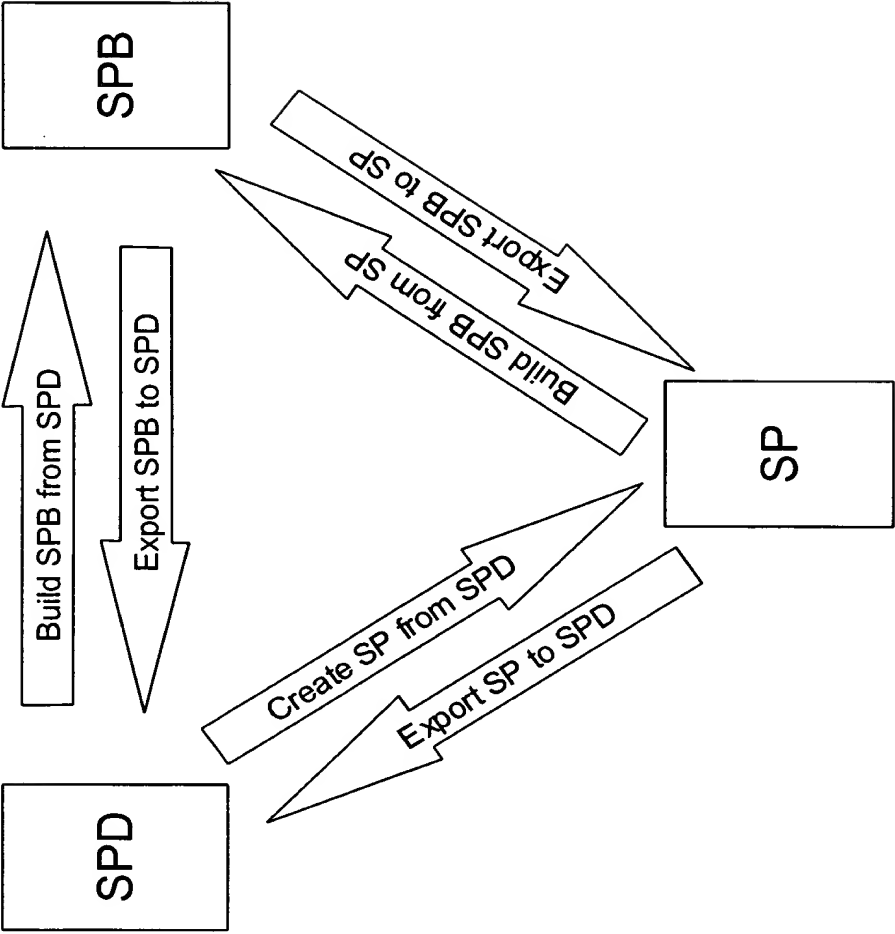


Figure 10

FIG. 10

Figure 11



```

...
add directory
  location = c:/Winnt/System32/
  destination = c:/Winnt/System32/
file
  name = MyApp.DLL
end
end

add directory
  location = c:/MyApp
  destination = c:/MyApp
  descend_dirs = Y
end
...

```

Figure 12(a)

Figure 12(b)

```
...
add directory
    condition = "$os_name) LIKE 'Win*'"
    location  = c:/winnt/system32
    destination = $(system_dir)
file
    name = MyApp.DLL
end
end
add directory
    condition = "$os_name) == SunOS OR $(os_name) == AIX"
    location  = c:/unix/
    destination = $(home_path)
file
    name      = MyApp.a
end
end
...
```

Figure 12(c)

```
...
add directory
    location = c:/MyApp
    destination = $(target_dir)
    file
        name = MyApp.CFG
        substitute_variables = y
    end
end
...
```

Figure 13(a)

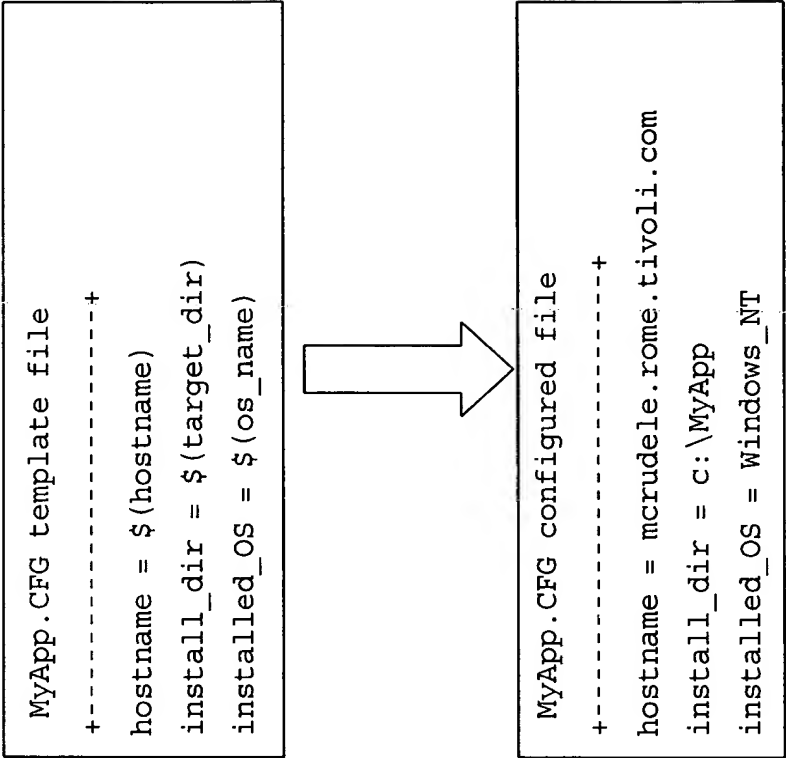


Figure 13(b)

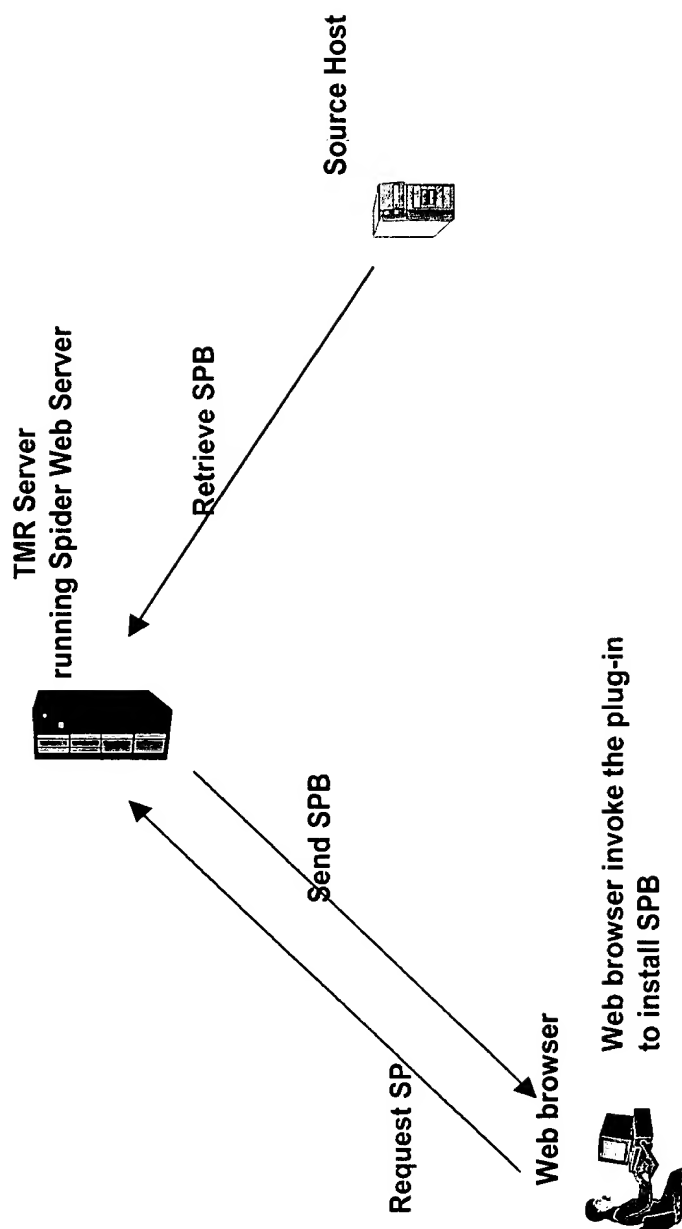


Figure 14

wdcrtsp	Create a SPB file from a SPD file
wdexptsp	Export a SPB file into SPD file
wdbldspb	Build a SPB file from a SP
autopack	Run AutoPack snapshots/differences
wdinstsp	Install a SPB
wdrmvsp	Remove a SP
wdcmmtsp	Commit a SP
wdundosp	Undo a SP Install/Remove
wdacptsp	Accept an undoable Install/Remove
wdversp	Verify the state of a SP

Figure 15

wimspso	Associate a Software Package to a SPO
wconvspso	Convert the format of a SPO
wexpso	Export a SPO into SPD file
wldsp	Loads SP on one or more Depots
wuldsp	UnLoad a SP from one or more Depots
winstsp	Install a SP
wremovsp	Remove a SP
wcommitsp	Commit a SP
wundosp	Undo a SP Install/Remove
waccptsp	Accept an undoable Install/Remove
wversp	Verify the state of a SP

Figure 16

102210" 11899250

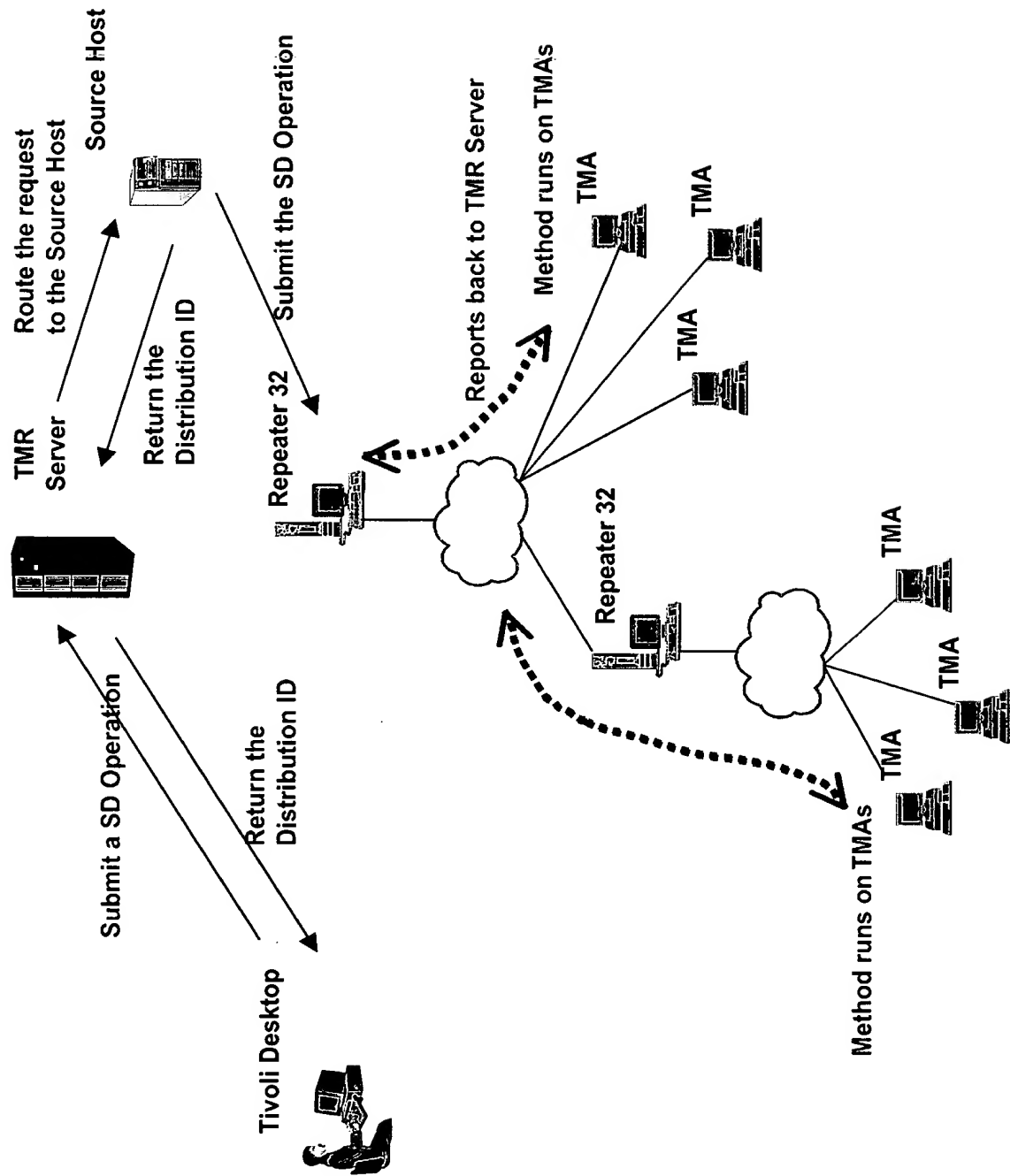


Figure 17

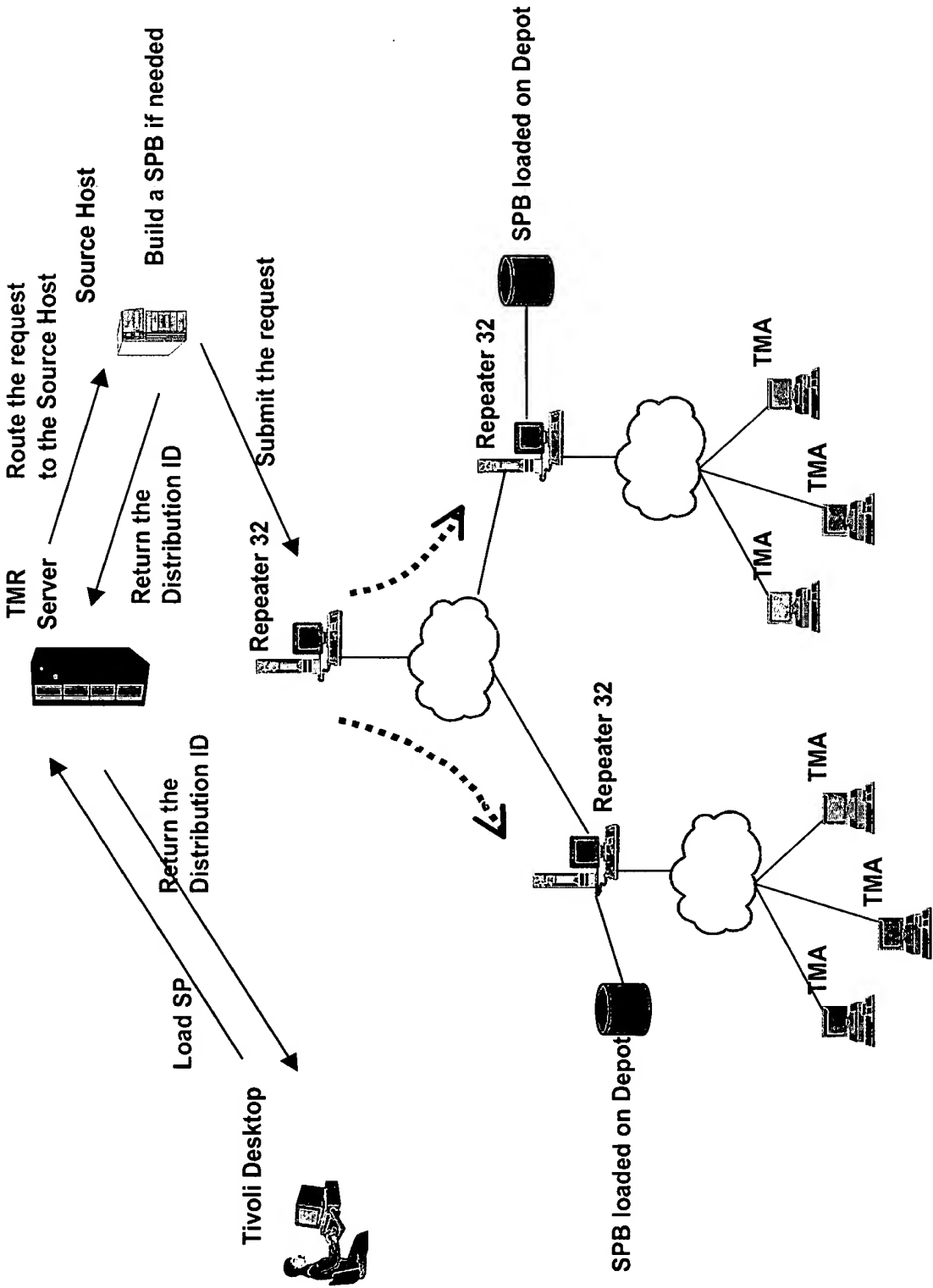


Figure 18

	Install	Remove	Accept	Undo	rollBack	Commit	Verify
transactional	X	X		X			
undoable	X	X					
undoable in transactional	X	X					
transactional & undoable	X	X					

Figure 19

Operation	State	Undo state	Reboot state	Flag
Install	Prepared	Prepared	ReBoot requested	Changing
Remove	Committed	Undoable	-	In Error
		Restored		-
		-		

IC--- means that an Install has been committed
 ICU-- means that an Install has been committed and can be undone
 IP-BC means that an Install has been prepared and it will be committed during the next reboot
 RCU-- means that a Remove has been committed but it can be undone
 IC--E means that an Install has been committed but the SP is in error, so the application may not work properly

Figure 20

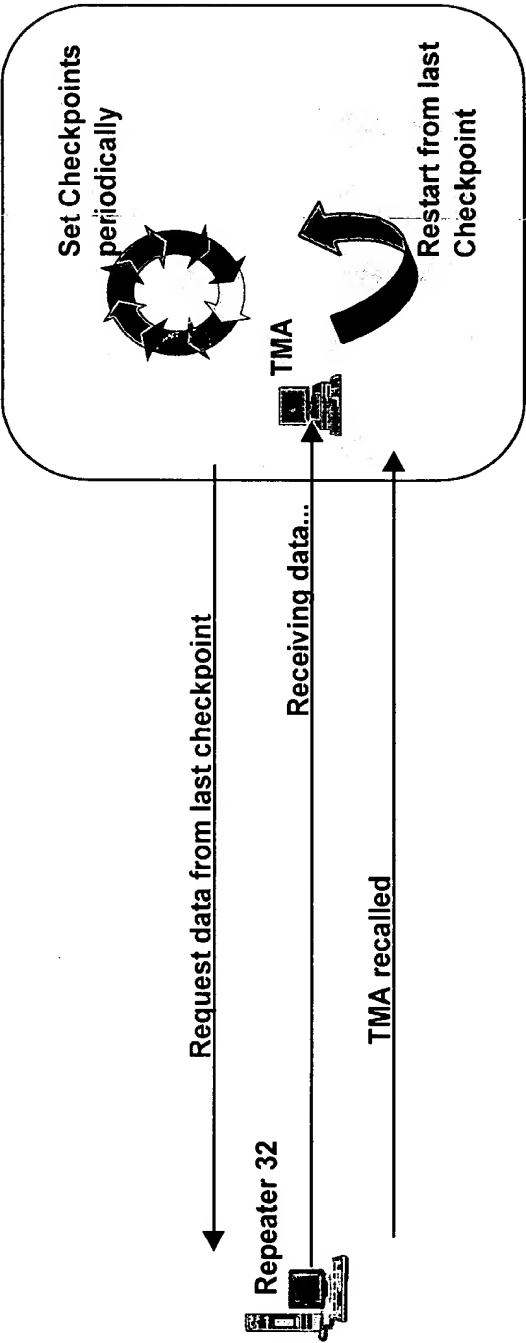


Figure 21

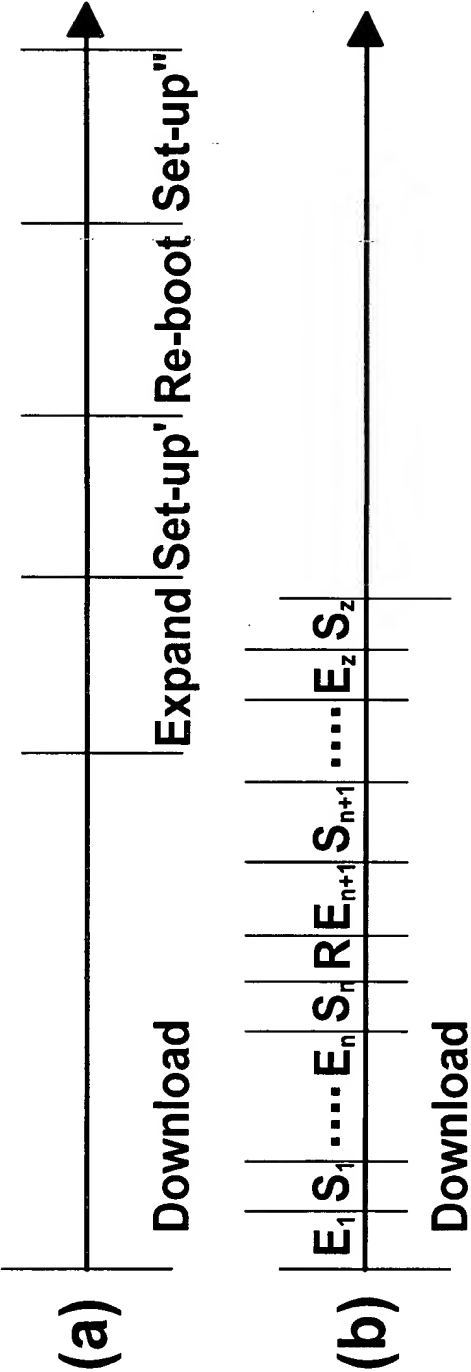


Figure 22

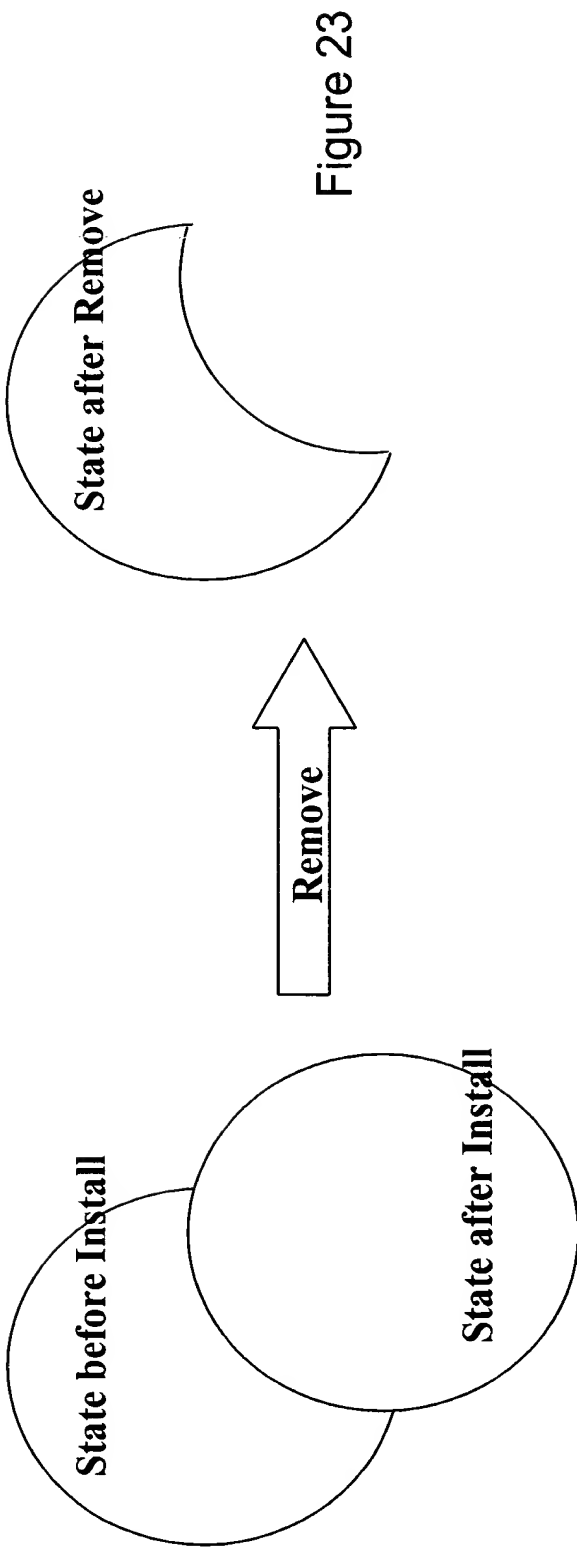


Figure 23

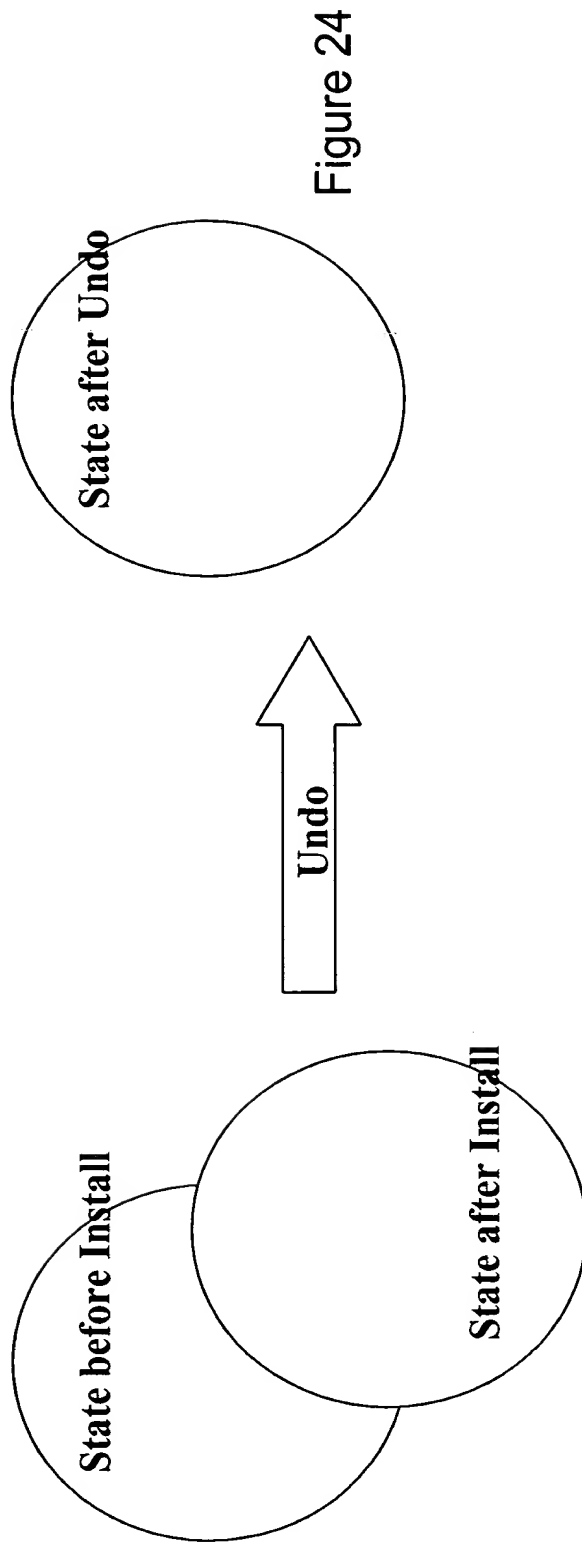


Figure 24

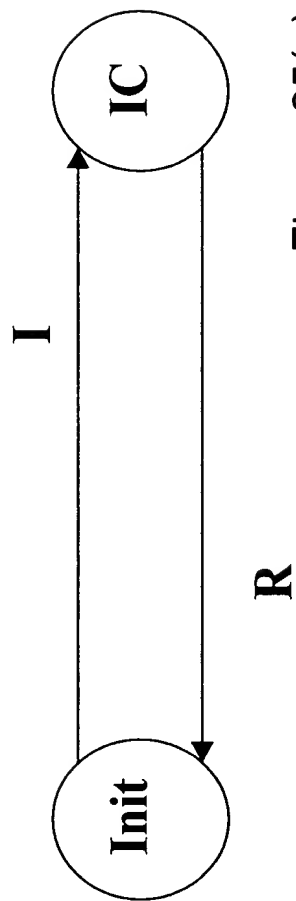


Figure 25(a)

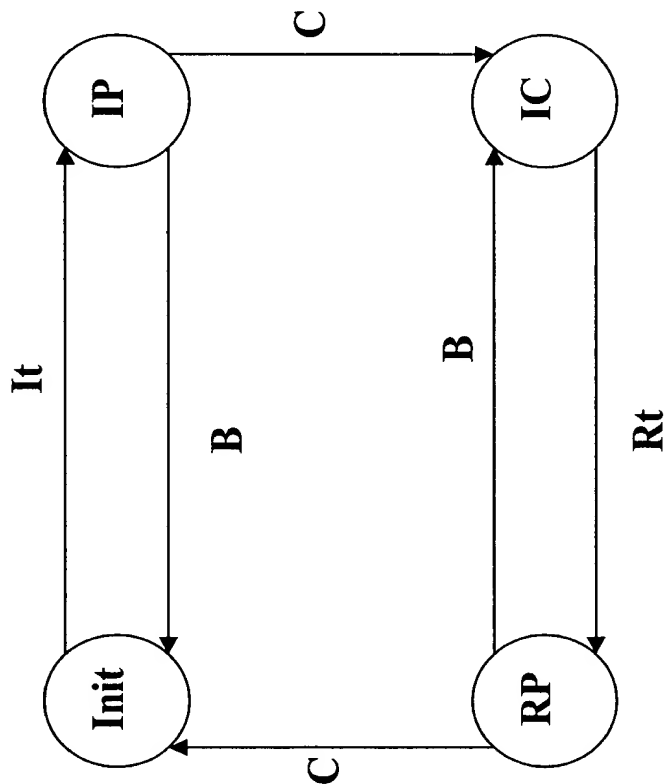


Figure 25(b)

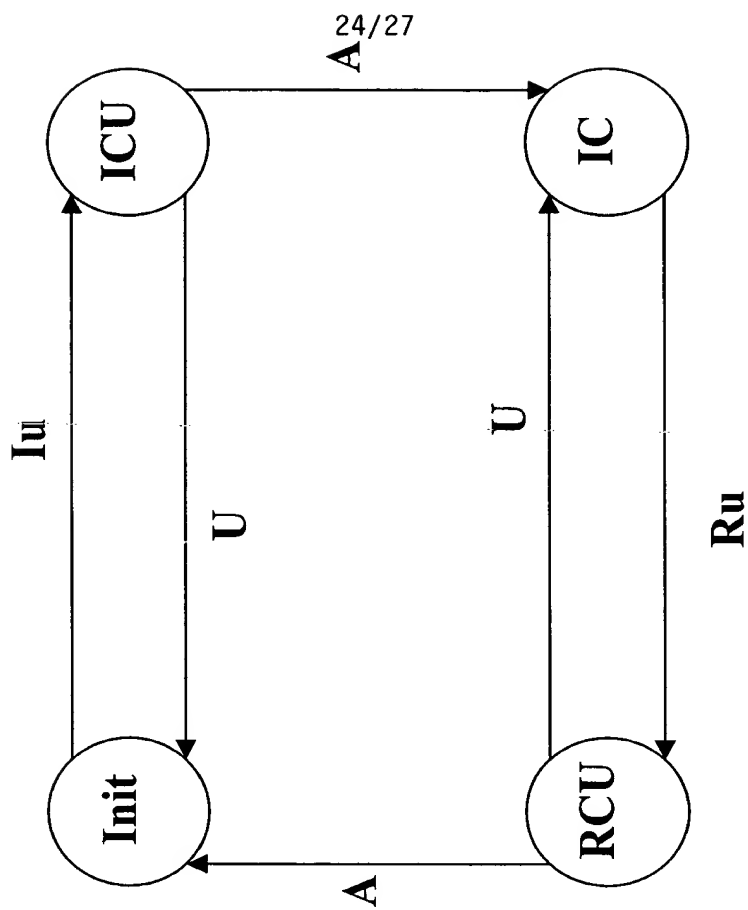


Figure 25(c)

FIG. 25

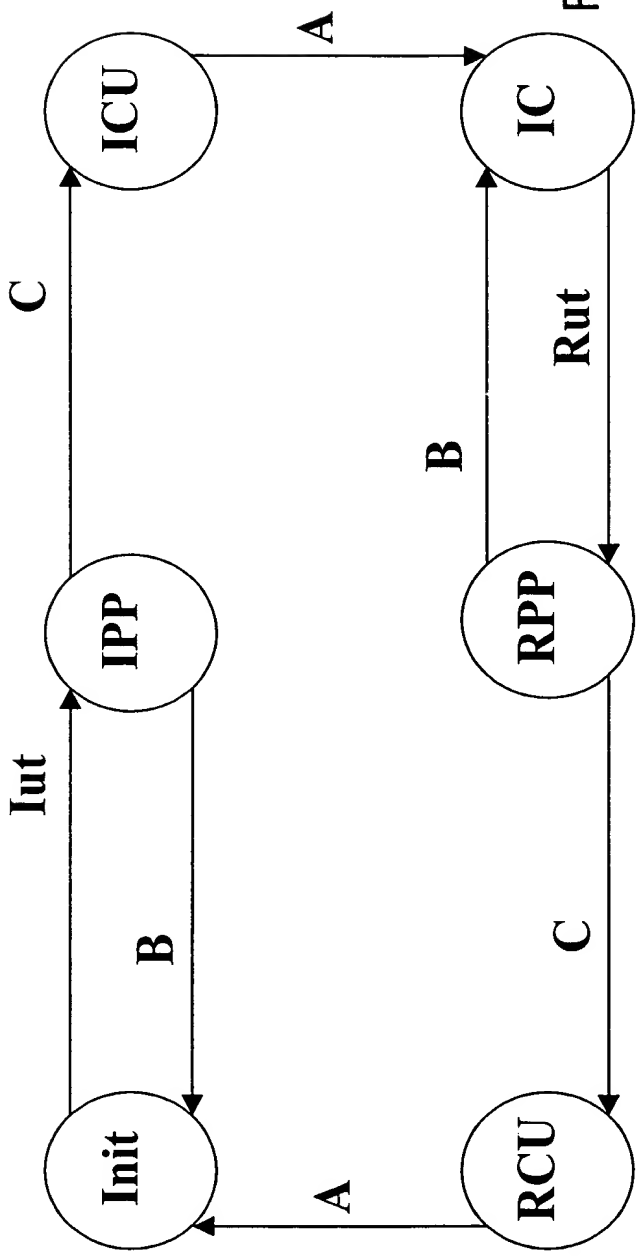


Figure 25(d)

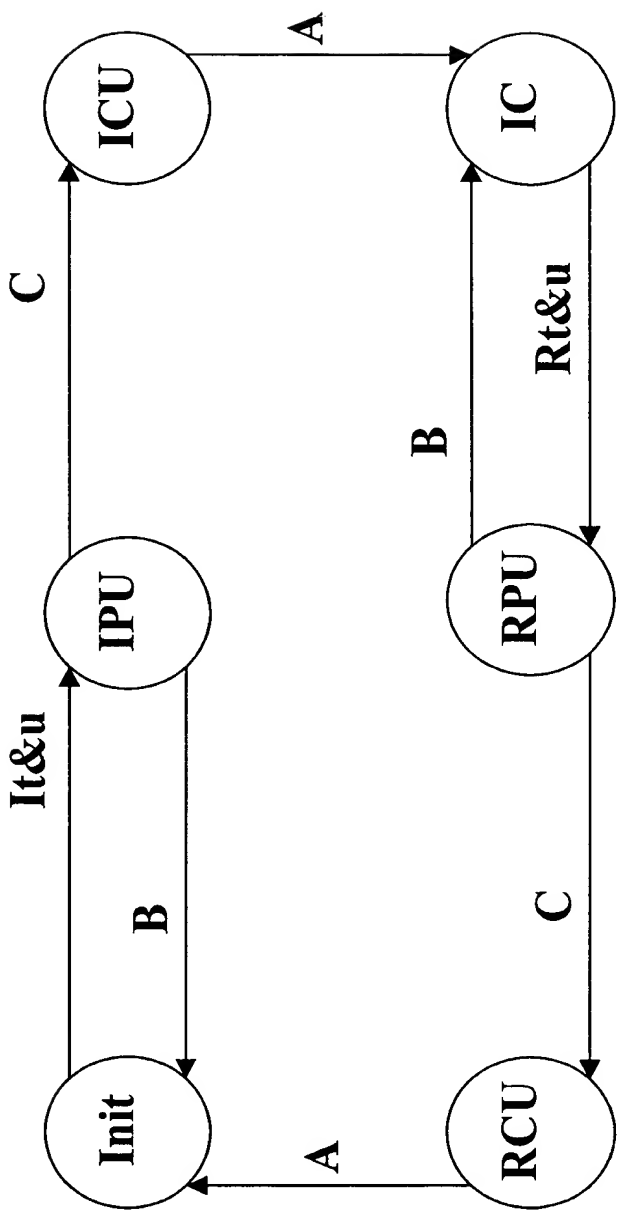


Figure 25(e)

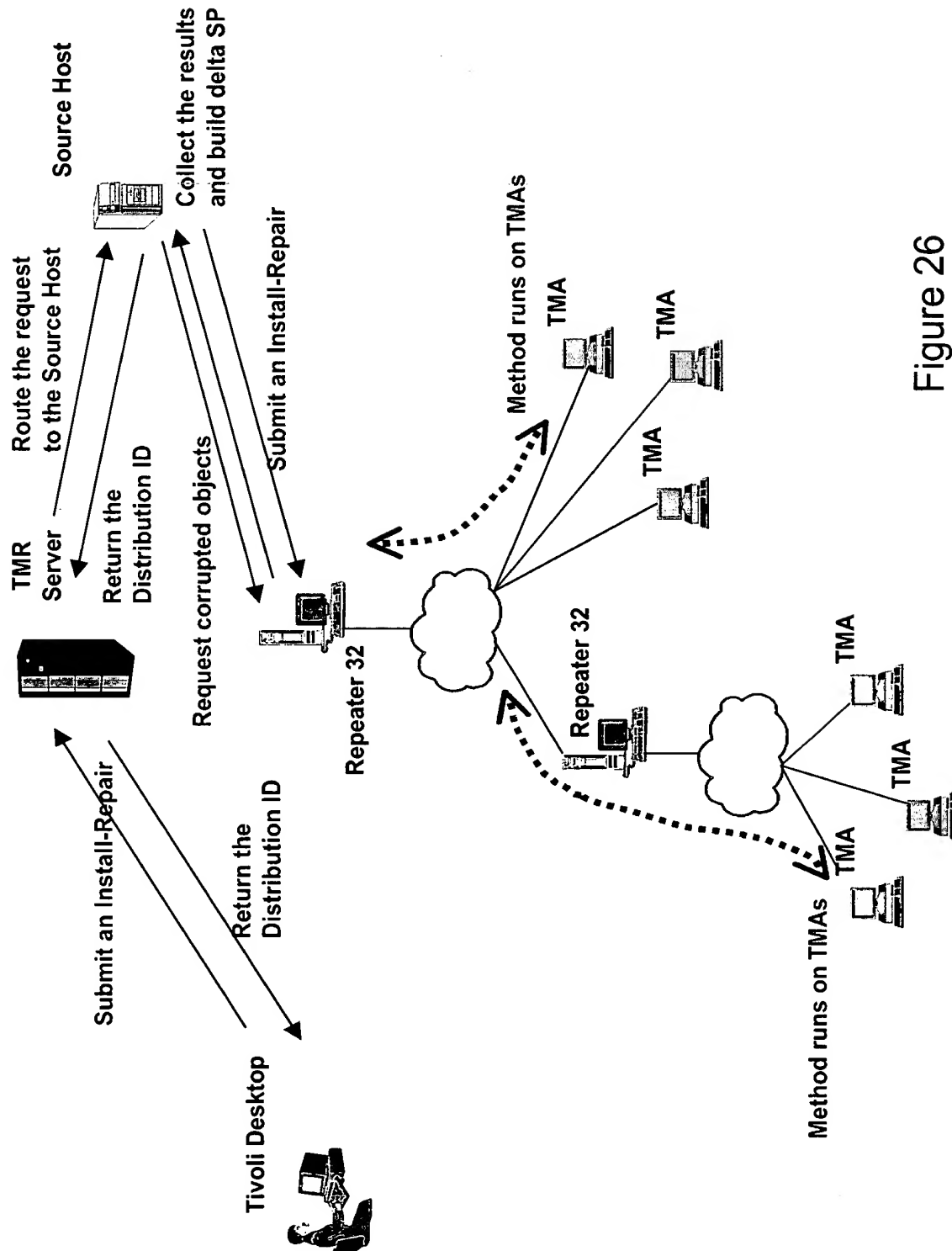


Figure 26

```
...
## Mount the image directory
execute_user_program
during_install
    name      = $(system_dir)/NET.EXE
    arguments = "USE $(freedrive_01) $(remote_name)"
end
end
## Run the setup to perform the installation
execute_mssetup_program
during_install
    name      = $(freedrive_01)/setup.exe
    arguments = "/Q1 /B1"
end
end
## U-mount the image directory
execute_user_program
during_install
    name      = $(system_dir)/NET.EXE
    arguments = "$(freedrive_01) /d"
end
end
...
```

Figure 27